State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: March 26, 2010

TO: Jaworski, Mark, OLQ SI THRU: Admire, Beth, OLC
Hauer, Gabriele, OLQ SI

FROM: Smith, Jim R., OLC, NRD Program

SUBJECT: Gary Development Landfill Site, Gary, Lake County, Indiana
Modification of November 24, 2009 Memorandum

The Indiana Department Environmental Management (IDEM) Natural Resource Damages (NRD) Program was asked to respond to questions and provide updates to the rare, threatened or endangered species memorandum produced on November 24, 2009 for the Gary Development Landfill site. Specific comment to be addressed was:

> *Smith 11/24/09 Memo - Figure 1:*
> *Please double check that the natural areas evaluated for this memo were areas that are contiguous to the Grand Calumet River from the PPE of Gary Development to when it meets Lake Michigan.*
> *A color map is preferred.*
> *Figure needs to be larger so text in lower left hand corner can be read.*
> *"INTERNAL DELIBERATIVE INFORMATION" - Region would prefer a releasable map of the areas, if possible.*

Response: After discussion with U.S. EPA staff the following were determined: Staff of Indiana Department of Environmental Management NRD Program wrote the November 24, 2009 memo to illustrate relevance of Gary Development Landfill site to the unique habitats formed as part of the Grand Calumet River Natural Habitat Corridor. Natural areas between Bridge Street in Gary (east edge of area illustrated in attached Figure 1) to Roxana Marsh (west edge of area illustrated in attached Figure 1) form an extremely unique habitat corridor connecting globally rare dune and swale and riverine habitats throughout. Gary Development Landfill is directly in the center of this corridor and as such forms an important link in this corridor. Remediation of the site and restoration of wetlands and aquatic habitat will facilitate protection and connectivity of the numerous rare, threatened and endangered species within this corridor.

The map illustrated in Figure 1 has been updated to include a buffer along the Grand Calumet

River, which buffer is area discussed within text relative to Rare, Threatened and Endangered species occurrence and primary Natural Areas. The Figure has been replaced in the attached memo and is submitted as a separate PDF file to facilitate transmittal to U.S. EPA as a color illustration.

Attachments (2)

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: November 24, 2009

TO: Jaworski, Mark, OLQ SI

THRU: Admire, Beth, OLC
Hauer, Gabriele, OLQ SI

FROM: Smith, Jim R., OLQ, NRDA

SUBJECT: Gary Development Landfill Site HRS – Particular Areas, Relatively Small in Size, Important to Maintenance of Unique Biotic Communities,

and Bibliographic Information on Dr. Jim Smith (attached as Appendix A)

Particular Areas, Relatively Small in Size, Important to Maintenance of Unique Biotic Communities are: "Areas that are important for the maintenance of unique, rare, or otherwise ecologically valuable biotic communities. . . . [including] . . . Areas with a high proportion of species with highly restrictive habitat requirements due to unusual natural biotic and/or abiotic conditions; highly isolated area that may not have an unusual community structure per *se*, but because of its geographic isolation is particularly important to the continued existence of that community; areas with a high proportion of species that are locally endemic because of a relatively long period of geographical isolation and/or exceptional examples of "climax" communities because of minimal human disturbance; or areas vital for a species that are important to the maintenance of a community" (US EPA 1992).

The Gary Development Landfill site provides several of these functions to the Grand Calumet River Corridor providing a continuity to riverine wetlands, natural areas (some protected by State ownership, dedicated Natural Areas, sensitive biotic communities and globally rare Dune and Swale habitat) (see Figure 1 below) for details of Grand Calumet River Corridor communities). Clean up and restoration of riverine wetlands and protection of the corridor adjacent to south of the Gary Development Landfill site will provide and enhance a link between rare and fragmented habitats along the river corridor. The following text, Table 1, and Figure 1 provide details of community and habitat components that provide evidence of unique function of corridor connectivity that the Gary Development Landfill site serves, meeting many of the definition requirements listed above for this Sensitive Environment type.

Threatened & Endangered Species

The Indiana Department of Natural Resources Heritage Database contains a list of several hundred potentially endangered, threatened, rare, of special concern, extirpated, and watch list species that

occur in Lake County, Indiana. Of those species in Lake County, a small subdivision occurs or potentially could occur within the Grand Calumet River-Indiana Harbor Canal Area of Concern (GCR-IHC). Table 1 provides a summary of county/GCR-IHC Rare and Endangered species in the database.

Table 1. Summary of Endangered, Threatened and Rare species in Grand Calumet River – Indiana Harbor Canal Area of Concern, Lake County Indiana.

Group	LE	LT	C	PDL	SE	ST	SR	SSC	SX	SG	WL
Plant		2			31	23	38		6		4
Plant Community											13
Mollusk											
Insect[1]	3				5	8	7		2		1
Fish					1						
Amphibian								3			
Reptile			1		4			4			
Bird	1	1		3*	13			3	1		
Migratory Bird Area											
Mammal					1						

Federal Listings: LE – Endangered; LT- Threatened; C – Candidate; PDL – Proposed for delisting
State Listings: SE – Endangered; ST – Threatened; SR – Rare; SSC – Special Concern; SX – Extirpated; WL – Watch List; SG – Special Group
* Birds have been delisted by USFWS and have no current ESA status
[1] Insect surveys in 2005 and 2008 has significantly increased the number of State Rare, State Threatened and State Endangered Insects in the AOC. The added species are included in the listing below this Table.

Of those rare, threatened or endangered species that occur in the GCR-IHC AOC (Hellmich, 2009), the following have been recorded within ½ mile of Grand Calumet River Corridor between Gary and Hammond (see Figure 1 for area of consideration):

Insects

- *Acronicta dactylina* (none) - SR
- *Aethes patricia* (none) – SE
- *Agrotis stigmosa* (none) - ST
- *Agrotis vetusta* (A Moth) - SR
- *Ancylis semiovana* (none) – SR
- *Anepia capsularis* (The Starry Campion Capsule Moth) - SR
- *Apamea nigrior* (Black-dashed Apamea) - SR
- *Atrytonopsis hianna* (Dusty Skipper) – ST
- *Bruchomorpha dorsata* (none) – SR
- *Bruchomorpha extensa* (Long-nosed Elephant Hopper) – SR
- *Capis curvata* (A Noctuid Moth) - ST
- *Chloealtis conspersa* (Sprinkled Locust) – SR
- *Chlorotettix fallax* (A Leafhopper) - SR
- *Conocephalus saltans* (Prairie Meadow Katydid) – SR
- *Coenochroa illibella* (Dune Panic Grass Moth) - SR
- *Cosmotettix bilineatus* (Two-lined Cosmotettix) - ST
- *Croesia semipurpurana* (Oak Lieftier) – SR
- *Cycnia inopinatus* (The Unexpected Milkweed Moth) – SR
- *Erynnis persius persius* (Persius Dusky Wing) – SR
- *Eucoptocnemis fimbriaris* (A Noctuid Moth) - ST

- *Eucosma bilineana (none) - SR*
- *Eucosma fulminana* (none) – SR
- *Eucosma giganteana* (none) - SR
- *Euphyes dion* (Sedge Skipper) – SR
- *Fagitana littera* (The Marsh Fern Moth) - ST
- *Faronta rubripennis* (The Pine Streak) – ST
- *Flexamia reflexus* (Indiangrass Flexamia) - ST
- *Grammia figurate* (The Figured Grammia) - SR
- *Grammia mohri (none) - SR*
- *Grammia oithona* (Oithona's Grammia) – SR
- *Grammia phyllira* (Sand Barrens Grammia) - SR
- *Grammia virguncula* (none) - SR
- *Hesperia leonardus* (Leonard's Skipper) – SR
- *Hesperptettix viridis pratensis* (A Grasshopper) – SR
- *Hypenodes caducus* (Large Hypenodes) - SR
- *Hyperaeschra georgica* (Georgian Prominent Moth) - **
- *Laevicephalus acus* (none) - SR
- *Lemmeria digitalis* (A Noctuid Moth) - SR
- *Leucania inermis* (A Moth) - SR
- *Leucania linita* (Salt Marsh Wainscot) - SR
- *Lodopepla u-album* (A Noctuid Moth) - SR
- *Lycaeides melissa samuelis* (Karner Blue Butterfly) – SE, LE
- *Lycaena helloides* (Purplish Copper) - SR
- *Macrochilo absorptalis* (A Moth) – SR
- *Macrpchilo hypocritalis* (A Noctuid Moth) – SR
- *Macrochilo louisiana* (none) – ST
- *Meropleon ambifuscum* (Newman's Brocade) - ST
- *Mesamia nigridorsum* (A Leafhopper) – SR
- *Metanema determinate* (Dark Metanema) - SR
- *Neoconocephalus nebrascensis* (A Katydid) - SR
- *Nola cilicoides* (none) – SR
- *Notodonta scitipennis* (A Notodontid Moth) - **
- *Oligia obtuse* (A Noctuid Moth) - SE
- *Oncocnemis riparia* (The Dune Oncocnemis Moth) - ST
- *Papaipema berriana* (Beer's Blazing Star Borer Moth) - ST
- *Papaipema leucostigma* (Columbine Borer) – ST
- *Papaipema lysimachiae* (St. John'swort Borer Moth) - SR
- *Papaipema maritime* (Giant Sunflower Borer Moth) – ST
- *Papaipema rigida* (A Borer Moth) - SR
- *Paraphlespsius lobatus (none) - ST*
- *Paraphlespsius maculosus* (Peppered Paraphlepsius Leafhopper) - ST
- *Peoria gemmatella* (Gemmed Cordgrass Borer) – SR
- *Peoria tetradella* (none) – SR
- *Phaneta ochroterminana* (none) - SR
- *Phaneta olivaceana* (none) – SR
- *Phaneta umbrastriana* (none) - SR
- *Phareta raracana* (none) - SR
- *Phaneta striatana* (none) – SR
- *Philaenarcys killa* (Great Lakes Dune Spittlebug) – SR
- *Phytometra ernestinana* (Ernestine's Moth) - SE
- *Platyperigea meralis* (Rare Sand Quaker) - ST
- *Poanes Massasoit (*Mulberry Wing Skipper) – SR
- *Polites mystic* (Long Dash Skipper) – SR
- *Polyamia caperata* (Little Bluestem Polyamia) - SR
- *Polyamia herbida* (Prairie Panic Grass Leafhopper) - ST

- *Problema byssus* (Bunchgrass Skipper) – ST
- *Prosapia ignipectus* (Red-legged Spittle Bug) - SR
- *Protorthodes incincta* (Saturn Quaker) – SR
- *Pyrausta laticlavia* (Southern Purple Mint Moth) - SR
- *Satyrodes eurydice* (Eyed Brown) - SR
- *Semiothisa eremiata* (The Goat's Rue Looper) – SR
- *Scirpophaga perstrialis* (none) – SR
- *Spartiniphaga inops* (Spartina Borer Moth) – SR
- *Spilosoma latipennis* (The Red-legged Tussock Moth) - SR
- *Speyeria Aphrodite* (Aphrodite Fritillary) - WL
- *Sphinx luscitiosa* (Luscious Willow Sphinx) – SR
- *Sympetrum semicinctum* (Band-winged Meadowhawk) - SR
- *Tarachidia binocular* (Prairie Tarachidia) - **
- *Thorybes pylades* (Northern Cloudywing) – SR
- *Tricholita notata* (Marked Noctuid) – ST
- *Trichosilia manifesta* (The Record Keeper Moth) –SR
- *Trimerotropis maritime* (The Dune Locust) - ST

Reptiles and Amphibians

- *Ambystoma laterale* (Blue-spotted Salamander) – SSC
- *Rana pipiens* (Northern Leopard Frog) – SSC
- *Acris crepitans* (Northern Cricket Frog) – SSC[1]
- *Clemmys guttata* (Spotted Turtle) - SE
- *Emydoidea blandingii* (Blanding's Turtle) – SE
- *Sistrurus catenatus catenatus* (Eastern Massasauga) - SE, C
- *Thamnophis proximus proximus* (Western Ribbon Snake) - SSC
- *Ophisaurus attenuatus attenuatus* (Western Slender Glass Lizard) - NS

Birds

- *Ardea alba* (Great Egret) – SSC
- *Bartramia longicauda* (Upland Sandpiper) – SE
- *Botaurus lentiginosus* (American Bittern) – SE
- *Buteo lineatus* (Red-shouldered Hawk) - SSC
- *Certhia Americana* (Brown Creeper) – **
- *Chilidonias niger* (Black Tern) – SE
- *Cistothorus platensis* (Sedge Wren) – SE
- *Cistothorus palustris* (Marsh Wren) – SE
- *Haliaeetus leucocephalus* (Bald Eagle) – SSC
- *Ixobrychus exilis* (Least Bittern) – SE
- *Nycticorax nycticorax* (Black-crowned Night-heron) – SE
- *Rallus elegans* (King Rail) – SE
- *Rallus limicola* (Virginia Rail) – SE
- *Xanthocephalus xanthocephalus* (Yellow-headed Blackbird) – SE

Mammals

- *Spermophilus franklinii* (Franklin's Ground Squirrel) – SE

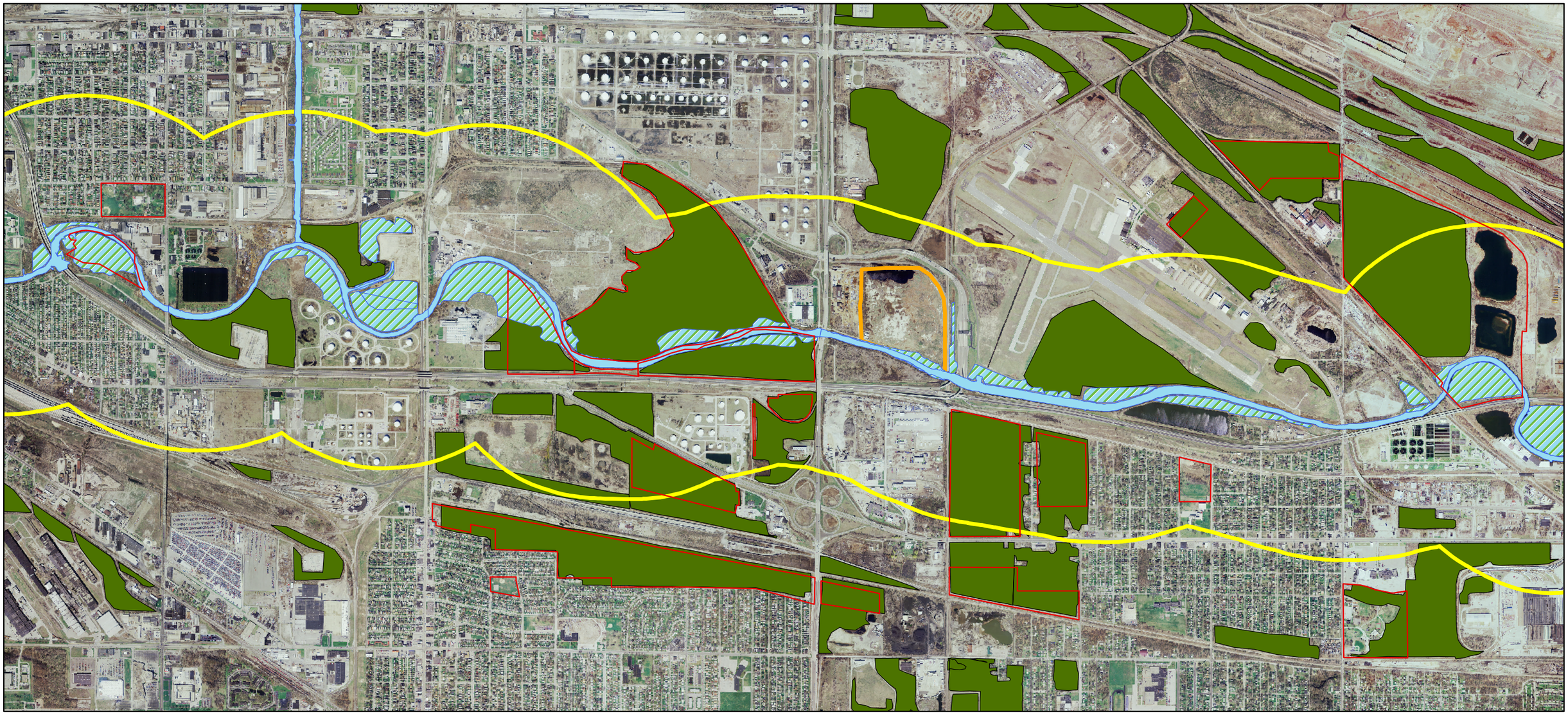
Plants

- *Agalinis skinneriana* (Pale False Foxglove) – ST
- *Alnus rugosa* (Speckled Alder) - SWL
- *Arctostaphylos uva-ursi* (Bearberry) – SR

- *Buchnera americana* (Bluehearts) - SE
- *Carex atherodes* (Lake sedge) – ST
- *Carex aurea* (Golden-fruited Sedge) – SR
- *Carex bebbii* (Bebb's Sedge) – ST
- *Carex brunnescens* (Brownish Sedge) – SE
- *Carex crawei* (Crawe Sedge) – ST
- *Carex garberi* (Elk Sedge) – ST
- *Carex limos* (Mud Sedge) – SE
- *Carex richardsonii* (Richardson Sedge) – ST
- *Cirsium hillii* (Hill's Thistle) - SE
- *Cypripedium calceolus* var. *parviflorum* (Small Yellow Lady's-slipper) - SR
- *Diervilla lonicera* (Northern Bush Honeysuckle) – SR
- *Eleocharis geniculata* (Capitate Spike-rush) – ST
- *Eriophorum angustifolium* (Narrow-leaved Cotton-grass) – SR
- *Gentiana alba* (Yellpw Gentian) - SR
- *Juncus balticus* var. *littoralis* (Baltic Rush) – SR
- *Lechea stricta* (Upright Pinweed) – SX
- *Melampyrum lineare* (American Cow-wheat) – SR
- *Orobanche fasciculate* (Clustered Broomrape) - SE
- *Platanthera hookeri* (Hooker Orchis) – SX
- *Platanthera hyperborea* (Leafy Northern Green Orchis) – ST
- *Platanthera psycodes* (Small Purple-fringe Orchis) – SR
- *Polygonella articulata* (Eastern Jointweed) – SR
- *Potamogeton pulcher* (Spotted Pondweed) – SE MU
- *Prunus pensylvanica* (Fire Cherry) – SR
- *Rhus aromatica* var. *arenaria* (Beach Sumac) – SR
- *Satureja glabella* var. *angustifolia* (Calamint) - SE
- *Selaginella apoda* (Meadow Spike-moss) – SWL
- *Solidago ptarmicoides* (Prairie Goldenrod) – SR
- *Solidago simplex* var. *gillmanii* (Sticky Goldenrod) – ST
- *Spiranthes lucida* (Shining Ladies'-tresses) – SR
- *Spiranthes magnicamporum* (Great Plains Ladies'-tresses) - SE
- *Talinum rugospermum* (Prairie Fame-flower) – ST
- *Tofieldia glutinosa* (False Asphodel) – SR

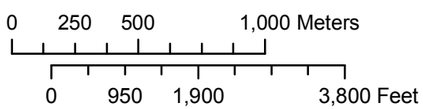
[1] Alan & Donna Resetar. 2007. IBI Metric Development and Validation for the Amphibians of the Grand Calumet River Area of Concern (GCR AOC). Report submitted to Indiana Department of Environmental Management.

Figure 1. Natural Features along Grand Calumet River Provide Unique Habitat Corridor.



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By:
Dr. Jim Smith, Office of Land Quality - NRD Program
Date:03/25/2010



Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

IDEM
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
EST. 1986

Legend

- Managed_Lands
- GCR_IHC_IH
- AOC_boundaries
- GCR_Buffer
- Gary_Development_site
- Riverine_Wetlands
- AOC-Dune&Swale

Natural Areas

In addition to the rare, threatened or endangered species listed above, several Nature Preserves and/or Natural Areas are located within or bordering the study area (Figure 1). Plant communities identified as "Special Groups" in the Heritage Database occur concurrent with some of the natural sites. These sites are described below.

Roxanna Pond (Marsh) Site – Located at the western edge of Grand Calumet River corridor depicted in Figure 1 and comprising a wetland shelf, Roxanna Marsh was a premier birding site prior the decline in Lake Michigan water level in the late 1990's. Exposure of mud flats and shallow open-water areas has resulted in near complete invasion of the marsh with common reed, cattails and purple loosestrife. Past records of occurrences of Least Bittern, Black-crowned Night-heron, Virginia Rail, Black Tern, Marsh Wren, and Yellow-headed Cowbirds are not likely to occur now because of sediment contamination and physical habitat change. In addition, occurrences of Northern Leopard Frog and Franklin's Ground Squirrel are not likely today because of the habitat changes.

Seidner Dune and Swale Nature Preserve and GCR Tern Site – Located on south side of river just west of the Gary Development Landfill site and includes a wetland shelf in the northern portion of the site. The Nature Preserve contains remnant dune and swale habitat and records of Franklin's Ground Squirrel, Great Egret, Black Tern, Marsh Wren, Leonard's Skipper, Sand Barrens Grammia, Gemmed Cordgrass Borer, Goat's Rue Looper, Oithona's Grammia, Two-lined Cosmotettix, and Baltic's Rush (Hellmich, 2009). Blue lupine (*Lupinus perennis L.*) is common in the area south of the wetland shelf, thus the federally endangered Karner Blue Butterfly is likely to occur on this site. The wetland shelf is dominated by common reed and cattails.

DuPont Dune and Swale Site – This natural area is located on the north side of the river, just north of Seidner Dune and Swale Nature Preserve and east of the USS Lead site. A wetland shelf is included within this area immediately adjacent to the river. The Natural Resource Trustees are working with DuPont to place a conservation easement on this natural area (as part of the NRDA Settlement). Records of King Rail, Franklin's Ground Squirrel, Blanding's Turtle, Northern Bush-honeysuckle, Prairie Goldenrod, Golden-fruited Sedge, Bebb's Sedge, Narrow-leaved Cotton-grass, Baltic Rush, and Meadow Spike-rush exist for this site. Additionally, Dry-mesic Sand Prairie, Wet-mesic Sand Prairie, and Dry Sand Prairie plant communities have been found on the site. Restoration completed by The Nature Conservancy has established Blue Lupine and Karner Blue Butterflies are now utilizing the site (Paul Labus, Personal Communication). Recent surveys of plant and insect communities on this site has resulted in; (1) 9 plant species of which 5 are Rare, 2 Endangered, 1 Threatened and 1 on State Watch List and (2) 69 species of insects of which 41 are State Rare, 5 State Endangered, 19 State Threatened and 4 on State Watch List (Hellmich, 2009).

Cline Avenue Nature Preserve and Cline Avenue Dune and Swale Site - This site is located approximately ½ mile south of Grand Calumet River and is south of the I90 Toll Road. The site contains Northern Bush-honeysuckle and has Dry-mesic Sand Prairie, Dry-mesic Sand Savanna, and Shrub Swamp Wetland plant communities. Surveys of insects between 2000 and 2007 have identified 32 State Rare, 2 State Endangered and 5 State Threatened species on this site (Hellmich, 2009).

Ivanhoe Dune and Swale, Ivanhoe Dune and Swale Nature Preserve - This site is located within a ½-mile buffer zone of the Grand Calumet River, just southeast of the project site and south of the I90 Toll Road. The site is a dedicated Nature Preserve and has records of Blue-spotted Salamander, Blanding's Turtle, Virginia Rail, Brown Creeper, Slender Glass Lizard, Bunchgrass Skipper, Dusted

Skipper, Karner Blue, Beach Sumac, Northern Bush-honeysuckle, Fire Cherry, Baltic Rush, and Leafy Northern Green Orchid. Additionally, plant communities associated with Pond, Dry-mesic Sand Prairie, Mesic Sand Prairie, Wet Sand Prairie, Dry-mesic Sand Savanna, Mesic Sand Savanna, Marsh, and Shrub Swamp exist at the site.

Pine Station Nature Preserve - This site is located approximately 1 .25 mile east of the Gary Development Landfill site. The site has records of Blanding's Turtle, Least Bittern, Virginia Rail, Marsh Wren, Franklin's Ground Squirrel, Spotted Turtle (more than ½ mile away, Slender Glass Lizard, Eastern Massasauga, Dusted Skipper, a Noctuid moth, Hill's Thistle, Prairie Goldenrod, Bearberry, Pale False Foxglove, American Cow-wheat, Golden-fruited Sedge, Brownish Sedge, Crawe Sedge, Elk Sedge, Richardson Sedge, Capitate Spike-rush, False Asphodel, Small Yellow Lady's-slipper (more than ½ mile from river), Spotted Pondweed (more than ½ mile from river), and other State Endangered, Rare or Threatened Species (see Hellmich, 2009 for most recent listings).

Other wetland shelves, remnant Dune and Swale habitat, and unique communities are depicted on Figure 1 below.

References

Alan & Donna Resetar. 2007. IBI Metric Development and Validation for the Amphibians of the Grand Calumet River Area of Concern (GCR AOC). Report submitted to Indiana Department of Environmental Management.

U.S. EPA 1992. Hazard Ranking System Guidance Manual. Office Solid Waste and Emergency Response. EPA 540-R-92-026. November, 1992.

Appendix A

Bibliographical Information

James (Jim) R. Smith, Ph.D.
Office of Legal Counsel (NRDA Program)
Indiana Department of Environmental Management
100 N. Senate Avenue – N-1307
Indianapolis, IN 46204-2251
(317) 232-3451
jsmith@idem.in.gov

Educational Background:

B.S. - Eastern Kentucky University, 1970 - Biological Sciences/Wildlife Management
M.S. - Eastern Kentucky University, 1975 - Biological Sciences/Wildlife Biology
Ph.D. - Southern Illinois University-Carbondale, 1986 - Zoology/Wildlife and Plant Ecology

Current Position: Senior Environmental Manager (Natural Resource Damage Coordinator)
Office of and Quality, Natural Resource Damage Program
Indiana Department of Environmental Management

Dr. Smith has worked for the Indiana Department of Environmental Management (IDEM) since 1990. Started in Office of Water Enforcement and after a year moved to Office of Environmental Response Superfund Program. Jim currently coordinates the Natural Resource Damage Program in IDEM which seeks to obtain damages ($) for injuries to Indiana's natural resources from the release of hazardous substance and/or spills of oil. Injury assessment involves characterization of chemical, biological and physical impacts to areas, media, and biota. Successful settlements and/or claims are utilized to restore, rehabilitate or acquire the equivalent of the injured natural resources. Restoration efforts include acquisition and protection of habitat through outright purchase, conservation easement or partnering with private or public land holding interests; and restoration of riparian and/or upland habitats through creation, enhancement or rehabilitation (eliminating ecological stresses). Jim has worked on or around the Grand Calumet River Area of Concern since 1992. He has conducted sediment, water, fish community, wetland plant community, fish tissue, sediment toxicity and invertebrate community analyses. Jim is currently working on a Feasibility Study with US Army Corps of Engineers and two Great Lakes Legacy Act projects with US EPA on the Grand Calumet River. Jim has received numerous recognitions for his work including being awarded Commission of "Colonel" on the Staff of the Governor of Kentucky in the "Honorable Order of Kentucky Colonels", twice awarded Indiana Department of Environmental Management's Environmental Excellence Award (the agency's highest award) for work in the NRD program and Remedial Action Plan Development for the Grand Calumet River, Indiana Harbor and Ship Canal Area of Concern and several Environmental Impact Awards for NRD activities. Jim has held positions of President-Elect, President, Past President and Board Member of Ohio Valley Regional Chapter of SETAC, member of Indiana Chapter American Fisheries Society, member of States Ad-

Hoc NRD Work Group, member Great Lakes NRD Roundtable Steering Committee and member of Sediment Advisory Group.

Experience:

Technical Advisor and Natural Resource Damage Coordinator, IDEM-OER- 1994 - present

Ecological Risk/ NRDA/ ARARs/Project Management - Superfund, IDEM-OER - 1992 - 1994

Remedial Project Manager, Superfund, IDEM-OER, 1991 - 1992

Enforcement, IDEM, Water Management - 1990 - 1991

University Administration/ Undergraduate Registration, Southern Illinois University-Carbondale, 1983 - 1989

College Teacher - Illinois College, 1983

Wildlife Researcher (Mined Land Research), Cooperative Wildlife Research Laboratory, Southern Illinois University-Carbondale, 1979-1982

Chemist, Kentucky Department of Agriculture, State –Federal Meat Inspection Laboratory, Frankfort, KY, 1975

Recent Publications

Simon, T.P**.,** G. Bright, F. Veraldi, J.R. Stahl, and **J.R. Smith**. 2006. New distribution records for the alien oriental weatherloach *Misgurnus audracaudatus* in the Lake Michigan drainage, Indiana. *Proceedings of the Indiana Academy of Science* 115: 32-36.

Simon, T.P., P.M. Stewart, D.W. Sparks, A. Piene, and **J.R. Smith**. 2004. Implications of Chinook salmon presence on water quality standards in a Great Lakes Area of Concern. *Proceedings of the Indiana Academy of Science* 113: 133-139.

MacDonald, D.D., C.G. Ingersoll, D.E. Smorong, R.A. Lindskoog, D.W. Sparks, **J.R. Smith**, T.P. Simon, and M.A. Hanacek. 2002. Assessment of injury to fish and wildlife resources in the Grand Calumet River and Indiana Harbor Area of Concern, USA. *Archives of Environmental Contamination and Toxicology* 43: 130-140.

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Ingersoll, C.G., D.D. MacDonald, W.G. Brumbaugh, B.T. Johnson, N.E. Kemble, J.L. Kunz, T.W. May, N. Wang, **J.R. Smith**, D.W. Sparks, and D.S. Ireland. 2002. Toxicity Assessment of Sediments from the GCR and IHC in Northwestern Indiana, USA. Archives of Environmental Contamination and Toxicology 43:156-167.

Smith, J.R. 2007. Supplement to Baseline Human Health Risk Assessment Grand Calumet River Feasibility Study Utilizing Uniform Protocol for Great Lakes Sport Fish Consumption Advisory. Report Prepared for Draft Environmental Impact Statement for Grand Calumet River Feasibility Study. IDEM, Office of Legal Counsel. September 2007.

Provided IDEM Oversight/Field Support on Projects

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